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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,582	03/08/2002	Dennis Crockett	16795-2	6875

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EXAMINER

TRAN, LY T

ART UNIT PAPER NUMBER

2853

DATE MAILED: 08/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/070,582

Applicant(s)

CROCKETT ET AL.

Examiner

Ly T TRAN

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-6 is/are allowed.
- 6) ☒ Claim(s) 1,2,7-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- ☐ Interview Summary (PTO-413) Paper No(s) _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 2, 7, 8/1-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimoto et al. (USPN 5,943078) in view of Applicant's disclosure (Page 3), Hermanson et al. (USPN 5,341,162) and Nakagaki (EP 60110458).

Nishimoto discloses an ink jet printing device comprising an ink jet head (Fig.9: element 1100), an ink reservoir (Fig.9: element 1401), a feeding line (Fig.9: element 1452, 1451), a re-circulation loop (Fig.9: element 1302, 1351, 1354) and stirring system (Fig.9: element 1402a).

However, Nishimoto et al fails to teach the mixing means, a means of heating the ink, stirring means consist of a magnetic stirring and pigment ink.

Applicant's disclosure teaches that static mixer is a well-known apparatus located within a straight tube part (Page 3: line 22-26).

Hermanson et al. teaches a means of heating the ink (Fig.2: element 32).

Nakagaki teaches stirring means consist of a magnetic stirring (Fig.: element 27, Abstract) and pigment ink (Abstract)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teaching of Nishimoto et al, applicant's disclosure and Hermanson et al to have the magnetic stirring as taught by Nakagaki. The motivation of doing so is in order to prevent the sedimentation and deposition of pigment ink (Abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teaching of Nishimoto et al to have mixer as taught by Applicant's disclosure. The motivation of doing so is in order to stirring the ink.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teaching of Nishimoto et al to have a means of heating the ink as taught by Hermanson. The motivation of doing so is the removal of gasses dissolved in the ink improves print quality (Hermanson USPN 5,341,162, Abstract).

Allowable Subject Matter

2. Claims 3-6 are allowed.

Response to Arguments

3. Applicant's arguments filed 6/4/03 have been fully considered but they are not persuasive.

Applicant's argument that the Examiner failed to consider that Applicant claim a recirculation loop, which is separate from the feeding line and taking ink from the

reservoir for returning it in the same reservoir again, while continuously mixing the ink through a recirculation is not persuasive because in the claim the Applicant only recites a recirculation loop, nothing about this recirculation loop, which is separate from the feeding line and taking ink from the reservoir for returning it in the same reservoir again, while continuously mixing the ink through a recirculation. Therefore, the combination still meets the limitation of the claim.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ly T TRAN whose telephone number is 703-308-0752. The examiner can normally be reached on M-F (7:30am-5pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 703-308-4896. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0967.



August 11, 2003



Stephen D. Meier
Primary Examiner